UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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SUBJECT: Draft Feasibility Study
Standard Chlorine

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The draft Feasibility Study (FS) for the Standard Chlorine site was reviewed for technical accuracy and comprehensiveness. Particular attention was focused on those aspects of the FS related to toxicological issues and human health concerns. In this regard, the following comments are offered:

On pages ES-3 and 1-23 of the report, a very brief discussion of subsurface soil contamination is presented. It is implied in the FS that because a complete and direct exposure pathway to contaminated subsurface soil does not currently exist at the site, this environmental medium is not considered for remediation. However, while direct contact with subsurface soil may not be a prevailing concern at the site for humans, the following points should be acknowledged:

1. It is possible, albeit unlikely (given site conditions and probable zoning restrictions), that contaminated subsurface soil will displace surface soil during future excavation and development efforts. If such events were to occur, highly contaminated soil would be available for contact by humans.

2. Exposure to contaminants in subsurface soil by ecological receptors, such as earthworms, can not be ignored.

3. In the absence of a secure and impermeable cap, subsurface soil will act as a continual source of contamination to underlying ground water. This point must be addressed in the FS.

According to page ES-8 of the FS, only those soils containing the "highest" concentrations of contaminants will be removed and treated; any remaining surface soils exceeding response levels will be contained by caps. Please note, however, that typically in the Superfund Program, *all* soils containing contaminants in excess of health-based, eco-based or ground water protection-based levels, as appropriate, are remediated.

On pages 1-19 and 1-20, non-carcinogenic and carcinogenic risks, as determined by the Baseline Risk Assessment (BLRA), are discussed. While it is recognized that future potential use of ground water as a potable source at the site is not probable, the risks associated with this pathway (as calculated in the BLRA) should be provided (quantitatively) in the FS.

In Table 2-2, the following corrections should be made:

1. As of December 1992, 1 µg/l is the *final* (rather than the *proposed*) Maximum Contaminant Level (MCL) for hexachlorobenzene. Table 2-5 should also be modified to reflect this point.

2. The MCL for 1,2,4-trichlorobenzene is 70 µg/l.

According to page 2-29, for carcinogens, response levels equivalent to a cancer risk of 1.0E-05 were established for the site. Please note, however, that EPA's point-of-departure for carcinogenic risk is 1.0E-06, with the potentially acceptable range being from 1.0E-06 to 1.0E-04, depending upon site-specific conditions. In any case, it is EPA's site manager who determines acceptable risk, not the PRP.

On page 2-30 of the report, it appears as though a *total* clean-up level of 625 mg/kg was calculated for soil contaminants at the site. However, this approach for establishing remediation goals is inappropriate, since it assumes that all contaminants are of equal toxicity or carcinogenic potential. Clean-up levels must be derived for *each* contaminant of concern at the site.